Philippa A Reed

List of Publications by Year
in descending order

100	2,241	186265	254184
papers	citations	28 h-index	43 g-index

103	103	103	1548
all docs	docs citations	times ranked	citing authors

#	Article	IF	Citations
1	Short crack initiation and growth at 600Â°C in notched specimens of Inconel718. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 340, 139-154.	5.6	98
2	Self-lubricating Ni-P-MoS2 composite coatings. Surface and Coatings Technology, 2016, 307, 926-934.	4.8	96
3	Synchrotron radiation computed tomography for experimental validation of a tensile strength model for unidirectional fibre-reinforced composites. Composites Part A: Applied Science and Manufacturing, 2015, 77, 106-113.	7.6	93
4	Fatigue crack initiation and short crack growth in nickel-base turbine disc alloys?the effects of microstructure and operating parameters*1. International Journal of Fatigue, 2003, 25, 1089-1099.	5.7	82
5	Microstructure effects on high temperature fatigue crack initiation and short crack growth in turbine disc nickel-base superalloy Udimet 720Li. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 448, 67-79.	5.6	78
6	Elevated temperature short crack fatigue behaviour in near eutectic Al?Si alloys. International Journal of Fatigue, 2003, 25, 863-869.	5.7	77
7	Grain size effects in a Ni-based turbine disc alloy in the time and cycle dependent crack growth regimes. International Journal of Fatigue, 2014, 62, 217-227.	5.7	75
8	Superplastic behaviour of AZ91 magnesium alloy processed by high-pressure torsion. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 637, 1-11.	5.6	68
9	An electrodeposited Ni-P-WS2 coating with combined super-hydrophobicity and self-lubricating properties. Electrochimica Acta, 2017, 245, 872-882.	5.2	65
10	Fatigue crack growth mechanisms in powder metallurgy Ni-based superalloysâ€"A review. International Journal of Fatigue, 2020, 141, 105887.	5.7	64
11	Characterisation of strain localisation processes during fatigue crack initiation and early crack propagation by SEM-DIC in an advanced disc alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2017, 699, 128-144.	5.6	62
12	Effects of microstructure on room temperature fatigue crack initiation and short crack propagation in Udimet 720Li Ni-base superalloy. International Journal of Fatigue, 2008, 30, 2009-2020.	5.7	54
13	Evaluating surface deformation and near surface strain hardening resulting from shot peening a tempered martensitic steel and application to low cycle fatigue. International Journal of Fatigue, 2013, 54, 106-117.	5.7	53
14	The effect of silicon content on long crack fatigue behaviour of aluminiumâ€"silicon piston alloys at elevated temperature. International Journal of Fatigue, 2005, 27, 1564-1570.	5.7	49
15	Effects of graphite nodules on crack growth behaviour of austempered ductile iron. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2007, 445-446, 374-385.	5.6	49
16	Influence of oxidation on fatigue crack initiation and propagation in turbine disc alloy N18. International Journal of Fatigue, 2015, 75, 89-99.	5.7	47
17	Effects of laser shock peening on the mechanisms of fatigue short crack initiation and propagation of AA7075-T651. International Journal of Fatigue, 2021, 143, 106025.	5.7	47
18	Role of oxygen in enhanced fatigue cracking in a PM Ni-based superalloy: Stress assisted grain boundary oxidation or dynamic embrittlment?. Corrosion Science, 2018, 139, 141-154.	6.6	46

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19	Strain accumulation and fatigue crack initiation at pores and carbides in a SX superalloy at room temperature. International Journal of Fatigue, 2018, 114, 22-33.	5.7	44
20	An example of the use of neural computing techniques in materials scienceâ€"the modelling of fatigue thresholds in Ni-base superalloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 1999, 260, 222-239.	5.6	41
21	Evolution of microstructure in AZ91 alloy processed by high-pressure torsion. Journal of Materials Science, 2016, 51, 3380-3389.	3.7	37
22	Analysis of fatigue crack initiation and Sâ€"N response of model cast aluminium piston alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 7331-7340.	5.6	36
23	Effects of microstructures on fatigue crack initiation and short crack propagation at room temperature in an advanced disc superalloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 641, 148-159.	5.6	36
24	Effects of oxygen-related damage on dwell-fatigue crack propagation in a P/M Ni-based superalloy: From 2D to 3D assessment. International Journal of Fatigue, 2017, 99, 175-186.	5.7	35
25	Micromechanisms of fatigue crack growth in cast aluminium piston alloys. International Journal of Fatigue, 2012, 42, 227-237.	5.7	33
26	Thermal activation of fatigue crack growth: Analysing the mechanisms of fatigue crack propagation in superalloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2008, 491, 279-289.	5.6	32
27	The effect of shot peening on notched low cycle fatigue. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2011, 528, 8579-8588.	5.6	32
28	Fatigue crack growth behaviour in the LCF regime in a shot peened steam turbine blade material. International Journal of Fatigue, 2016, 82, 280-291.	5.7	30
29	The effect of environment and orientation on fatigue crack growth behaviour of CMSX-4 nickel base single crystal at 650 Â°C. Materials Letters, 2004, 58, 99-103.	2.6	29
30	Effect of microstructure on fatigue behaviour of advanced high strength ductile cast iron produced by quenching and partitioning process. International Journal of Fatigue, 2017, 104, 397-407.	5.7	29
31	Resistive switching of Cu/SiC/Au memory devices with a high ON/OFF ratio. Solid-State Electronics, 2014, 94, 98-102.	1.4	27
32	The mechanisms of long fatigue crack growth behaviour in Alâ€"Si casting alloys at room and elevated temperature. Materials Science and Technology, 2007, 23, 1396-1401.	1.6	25
33	Fatigue crack growth and closure in fine-grained aluminium alloys. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2006, 428, 247-255.	5.6	23
34	A comparison of high temperature fatigue crack propagation in various subsolvus heat treated turbine disc alloys. Materials Science and Technology, 2007, 23, 1419-1423.	1.6	23
35	Fatigue crack growth mechanisms in superalloys: Overview. Materials Science and Technology, 2009, 25, 258-270.	1.6	23
36	Effects of shot peening on short crack growth rate and resulting low cycle fatigue behaviour in low pressure turbine blade material. Materials Science and Technology, 2013, 29, 788-796.	1.6	22

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37	Micromechanisms of short fatigue crack growth in an Alâ€“Si piston alloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2014, 612, 302-309.	5.6	22
38	Numerical modelling of crack shielding and deflection in a multi-layered material system. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 342, 11-22.	5.6	20
39	Amorphous SiC based non-volatile resistive memories with ultrahigh ON/OFF ratios. Microelectronic Engineering, 2014, 119, 61-64.	2.4	20
40	3-D analysis of fatigue crack behaviour in a shot peened steam turbine blade material. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2015, 642, 91-103.	5.6	19
41	A numerical study of the effects of shot peening on the short crack growth behaviour in notched geometries under bending fatigue tests. International Journal of Fatigue, 2017, 103, 99-111.	5.7	19
42	Microstructural Analysis of Fatigue Initiation in Al-Si Casting Alloys. Materials Science Forum, 2006, 519-521, 1083-1088.	0.3	17
43	On the mechanism of oxidation-fatigue damage at intermediate temperatures in a single crystal Ni-based superalloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2019, 742, 648-661.	5.6	16
44	Comparison of fatigue crack propagation behaviour in two gas turbine disc alloys under creepâ€“fatigue conditions: Evaluating microstructure, environment and temperature effects. Materials Science and Technology, 2013, 29, 781-787.	1.6	15
45	A knowledge-based system for cost modelling of aircraft gas turbines. Journal of Engineering Design, 2009, 20, 289-305.	2.3	14
46	Fatigue crack growth in a nickel-based superalloy at elevated temperature - experimental studies, viscoplasticity modelling and XFEM predictions. Mechanics of Advanced Materials and Modern Processes, 2015, 1, .	2.2	14
47	Fatigue assessment of multilayer coatings using lock-in thermography. Materials and Design, 2018, 141, 361-373.	7.0	14
48	Microstructural characterisation of fatigue crack initiation in Al-based plain bearing alloys. International Journal of Fatigue, 2003, 25, 1135-1145.	5.7	13
49	Microstructure variation effects on room temperature fatigue threshold and crack propagation in Udimet 720Li Niâ€base superalloy. Fatigue and Fracture of Engineering Materials and Structures, 2009, 32, 685-701.	3.4	13
50	Numerical modelling of the fatigue crack shape evolution in a shot-peened steam turbine material. International Journal of Fatigue, 2017, 104, 120-135.	5.7	13
51	Fatigue crack growth in IN718/316L multi-materials layered structures fabricated by laser powder bed fusion. International Journal of Fatigue, 2021, 152, 106454.	5.7	13
52	An investigation of crack growth behaviour under creep-fatigue condition. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 410-411, 67-71.	5.6	12
53	Effect of environment on notch fatigue behaviour in CMSX₄. Materials Science and Technology, 2007, 23, 1439-1445.	1.6	11
54	Effects of Î³Ê¹ size and carbide distribution on fatigue crack growth mechanisms at 650ÂÂ°C in an advanced Ni-based superalloy. International Journal of Fatigue, 2021, 145, 106086.	5.7	11

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55	Modelling of microstructural effects in the fatigue of austempered ductile iron. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2003, 346, 273-286.	5.6	10
56	Effects of mixed mode loading on fatigue and creepâ€“fatigue in SRR-99 single crystals. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2005, 394, 256-265.	5.6	10
57	A comparison of quasi-static indentation and low-velocity impact on composite overwrapped pressure vessels. Journal of Composite Materials, 2018, 52, 4051-4060.	2.4	10
58	Fatigue crack initiation and early growth in a multiphase Al alloy included in a multilayer material system. Materials Science and Technology, 2004, 20, 47-56.	1.6	9
59	Synthesis and Properties of Electrodeposited Niâ€“Co/WS2 Nanocomposite Coatings. Coatings, 2019, 9, 148.	2.6	9
60	Hypermedia systems for improving knowledge, understanding and skills in engineering degree courses. Computers and Education, 1998, 31, 69-88.	8.3	8
61	Classification of unbalanced data with transparent kernels. , 0, , .		8
62	A framework for user driven data management. Information Systems, 2014, 42, 36-58.	3.6	8
63	High temperature fatigue crack growth in powder processed nickel based superalloy U720Li. Materials Science and Technology, 2002, 18, 349-353.	1.6	7
64	Adaptive numerical modelling of high temperature strength, creep and fatigue behaviour in Ni based superalloys. Materials Science and Technology, 2007, 23, 1402-1407.	1.6	7
65	Comparison of fatigue performance of HVOF spray coated and conventional roll bonded aluminium bearing alloys. Materials Science and Technology, 2009, 25, 575-581.	1.6	7
66	A numerical study of crack shielding/anti-shielding in layered architectures. International Journal of Fatigue, 2019, 124, 503-519.	5.7	7
67	CBL in engineering: Students' use of a learning resource on phase diagrams. Computers and Education, 1995, 25, 75-80.	8.3	6
68	Anomalous crack shape development (tear drop cracking) in turbine disc material Udimet 720. Materials Science and Technology, 2000, 16, 133-146.	1.6	6
69	An effective method to investigate short crack growth behaviour by reverse bending testing. International Journal of Fatigue, 2007, 29, 565-574.	5.7	6
70	Managing heterogeneous datasets. Information Systems, 2014, 44, 34-53.	3.6	6
71	Effect on overall fatigue performance of varying thickness of an intermetallic sublayer within a soft multilayer coating. International Journal of Fatigue, 2021, 146, 106155.	5.7	6
72	Fatigue crack initiation and growth behavior in a notch with periodic overloads in the lowâ€cycle fatigue regime of FV566 exâ€service steam turbine blade material. Fatigue and Fracture of Engineering Materials and Structures, 2022, 45, 546-564.	3.4	6

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73	Microstructural Factors Affecting Fatigue Initiation in Various Al Based Bearing Alloys. Materials Science Forum, 2006, 519-521, 1071-1076.	0.3	5
74	Invited review: Adaptive numerical modelling and hybrid physically based ANM approaches in materials engineering â€“ a survey. Materials Science and Technology, 2009, 25, 488-503.	1.6	5
75	Data rich imaging approaches assessing fatigue crack initiation and early propagation in a DS superalloy at room temperature. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2021, 805, 140592.	5.6	5
76	Investigating the fatigue performance of soft multilayer coatings with varying locations of an intermetallic interlayer. International Journal of Fatigue, 2021, 145, 106130.	5.7	5
77	Microstructural and hardness evolution of additively manufactured Alâ€“Siâ€“Cu alloy processed by high-pressure torsion. Journal of Materials Science, 2022, 57, 8956-8977.	3.7	5
78	Mixed mode fatigue effects in Ni-base single crystals â€” Preliminary results. Scripta Metallurgica Et Materialia, 1992, 26, 1829-1834.	1.0	4
79	Microstructural Influences on Fatigue Crack Initation and Early Growth Behaviour in Plain Bearing Al-based Linings. Materials Science Forum, 2000, 331-337, 1445-1450.	0.3	3
80	A numerical study of crack shielding and deflection under extensive plasticity. Engineering Fracture Mechanics, 2009, 76, 1345-1356.	4.3	3
81	Fatigue crack shielding and deflection in plain bearings under large-scale yielding. Engineering Failure Analysis, 2010, 17, 648-657.	4.0	3
82	Utilising dynamic factory simulation to improve unit cost estimation and aid design decisions. , 2010, , .		3
83	Assessment of three-dimensional crack growth in ductile layered material systems. Engineering Fracture Mechanics, 2012, 88, 15-27.	4.3	3
84	Selection of appropriate numerical models for modelling the stresses in mooring chains. Marine Structures, 2021, 75, 102864.	3.8	3
85	Low-cycle fatigue assessment of offshore mooring chains under service loading. Marine Structures, 2021, 76, 102892.	3.8	3
86	Microstructural influences on fatigue crack initiation and early propagation in Ni-based superalloy. Materials Science and Technology, 2022, 38, 1081-1094.	1.6	3
87	The effects of surface pits and intermetallics on the competing failure modes in laser shock peened AA7075-T651: Experiments and modelling. International Journal of Fatigue, 2022, 155, 106568.	5.7	2
88	The Application of Neural Computing Methods to the Modelling of Fatigue in Ni-Base Superalloys. , 1996, , .		2
89	Control of fatigue failure mechanisms in multilayer coatings by varying the architectural parameters of an intermetallic interlayer. Fatigue and Fracture of Engineering Materials and Structures, 2022, 45, 1035-1051.	3.4	2
90	Effect of heat treatment on fatigue crack growth in IN718/316L multiple-materials layered structures fabricated by laser powder bed fusion. International Journal of Fatigue, 2022, 160, 106852.	5.7	2

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91	Characterisation of strain localisation under cyclic loading at 450ÂÂ°C by SEM-DIC in a PM Ni-based superalloy. Materials Science & Engineering A: Structural Materials: Properties, Microstructure and Processing, 2022, 849, 143464.	5.6	2
92	Data driven knowledge extraction of materials properties. , 1999, , .		1
93	High temperature fatigue â€“ Influences of environment and creep. Materials Science and Technology, 2007, 23, 1387-1388.	1.6	1
94	Deflected â€˜teardrop crackingâ€™ in nickel based superalloys: Sustained macroscopic deflected fatigue crack growth. International Journal of Fatigue, 2012, 44, 188-201.	5.7	1
95	Stress Relaxation in Shot-Peened Geometric Features Subjected to Fatigue: Experiments and Modelling. Advanced Materials Research, 0, 996, 729-735.	0.3	1
96	Research Data Management Education for Future Curators. International Journal of Digital Curation, 2013, 8, 288-294.	0.2	1
97	FONI-SPATE: A new fibre optic stress/strain sensor, using a near-infrared variant of the SPATE effect. Electronics Letters, 1994, 30, 1619-1620.	1.0	0
98	Fatigue, hardness and oxidation properties of sing.... , 2005, , .		0
99	Application of Xâ€Ray Microtomography to Evaluate Complex Microstructure and Predict the Lower Bound Fatigue Potential of Cast Alâ€“7(0.7)Siâ€“4Cuâ€“3Niâ€“Mg Alloys. Advanced Engineering Materials, 2017, 19, 1700218.	3.5	0
100	Modeling of crack path in layered architectures composed of dissimilar materials. Fatigue and Fracture of Engineering Materials and Structures, 0, , .	3.4	0